

WHAT IS CLAIMED IS:

1. Isolated nucleic acid
which encodes (a) a polypeptide, which includes the amino acid sequence of one of SEQ ID NOS:1, 3 and 5, or (b) a polypeptide having an amino acid sequence that is at least about 70% similar thereto and exhibits the same biological function;
or which is an alternative splice variant of one of SEQ ID NOS:2, 4 and 6; or
which is a probe comprising at least 14 contiguous nucleotides from said nucleic acid encoding (a) or (b) ; or
which is complementary to any one of the foregoing.
2. The isolated nucleic acid of claim 1 which is DNA or RNA.
3. The isolated nucleic acid of claim 1 which is a DNA transcript that includes the entire length of any one of SEQ ID NOS:2, 4 and 6 or which is complementary to the entire coding region of one of SEQ ID NOS:2, 4 and 6.
4. An antisense oligonucleotide directed against the DNA of claim 3.
5. The isolated nucleic acid of claim 1 which is an RNA transcript which includes the entire length of any one of SEQ ID NOS:2, 4 and 6.
6. The isolated nucleic acid of claim 1 which is an alternative splice variant of one of SEQ ID NOS:2, 4 and 6.
7. A polypeptide encoded by the nucleic acid of claim 6.
8. A nucleic acid probe according to claim 1 comprising at least 14 contiguous nucleotides from one of SEQ ID NOS:2, 4 and 6.
9. An isolated recombinant polynucleotide molecule comprising nucleic acid according to claim 1 plus expression-controlling elements linked operably with said nucleic acid to drive expression thereof.

10. An expression vector comprising the nucleic acid of claim 1 encoding a polypeptide having the entire amino acid sequence set forth in any one of SEQ ID NOS:1, 3 and 5 operably linked to a promoter, said expression vector being present in a compatible host cell.

11. A mammalian, insect or bacterial host cell that has been genetically engineered by the insertion of nucleic acid according to claim 1 which codes for at least the mature protein portion of the amino acid sequence of SEQ ID NO:1, 3 or 5.

12. A process for producing a polypeptide which includes the mature protein portion of one of SEQ ID NOS:1, 3 and 5, which process comprises culturing the host cell of claim 11 under conditions sufficient for the production of said polypeptide.

13. The process of claim 12 wherein said polypeptide is expressed at the surface of said cell and further includes the step of recovering the polypeptide or a fragment thereof from the culture.

14. A polypeptide
which may be optionally glycosylated, and
which (a) has the amino acid sequence of a mature protein set forth in any one of SEQ ID NOS:1, 3 and 5, (b) has the amino acid sequence of a mature protein having at least about 70% similarity to one of the mature proteins of (a) and which exhibits the same biological function, or (c) is an immunologically reactive fragment of (a).

15. The polypeptide according to claim 14 which is a mature protein having at least about 95% similarity to (a).

16. The polypeptide according to claim 14 having either the amino acid sequence of the mature protein of one of SEQ ID NOS:1, 3 and 5 or of a fragment thereof which exhibits the same biological function as the respective mature protein.

17. A DPRP antagonist which inhibits the biological function of one of said mature proteins of claim 14.

18. An antibody that recognizes a polypeptide or a fragment according to claim 14.

19. The antibody of claim 18 which recognizes a polypeptide having an amino acid sequence of SEQ ID NO:1 or 3 or 5.

20. A method for the screening for a compound capable of inhibiting the enzymatic activity of at least one mature protein of claim 14, which method comprises incubating said mature protein and a suitable substrate for said mature protein in the presence of one or more test compounds or salts thereof, measuring the enzymatic activity of said mature protein, comparing said activity with comparable activity determined in the absence of a test compound, and selecting the test compound or compounds that reduce the enzymatic activity.

21. A method for the screening for a compound capable of inhibiting the enzymatic activity of DPPIV that does not inhibit the enzymatic activity of at least one of the polypeptides of claim 16, which method comprises incubating said polypeptide and a suitable substrate for said polypeptide in the presence of one or more inhibitors of DPPIV or salts thereof, measuring the enzymatic activity of said polypeptide, comparing said activity with comparable activity determined in the absence of the DPPIV inhibitor, and selecting a compound that does not reduce the enzymatic activity of said polypeptide.

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